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REMARKS

Claims 1-26 are pending. Claims 14-22 have been withdrawn from consideration. Claims 1-13 and 23-26 are currently rejected. Claims 3-7 are currently canceled without prejudice.

Claims 1 and 2 have been amended to change the description of the polishing "composition" to polishing "slurry". This was done to keep the nomenclature consistent with that discussed in the specification. See, for example, the original specification at paragraph [0015].

The Office Action has objected to the specification because of the status of the prior application has not been updated. Applicants have amended the specification to update the status on U.S. Patent Application Number 09/609,480, which has issued as U.S. Patent Number 6,643,348. The applicants respectfully request that the objection to the specification be withdrawn.

The Office Action has stated that the Information Disclosure statement filed on October 22, 2003 fails to comply with 37 CFR §1.97, §1.98 and MPEP §609. Applicants provided, as a courtesy, a copy of the lists of references considered and/or cited by the Examiner in the parent application (U.S. Serial No. 09/609,480) of the instant application. Pursuant to 37 CFR §1.53(b) and MPEP §609.02 these references are already of record in the instant application. Accordingly, applicants will forego refiling an Information Disclosure Statement listing the identical references.

The Office Action has rejected claims 1, 2, 7-13, and 23 under 35 U.S.C. §102(e) as allegedly being anticipated by Allman et al. (US 6,541,383). The Office Action states that Allman teaches a method for polishing a substrate feature where a polishing composition may be applied to a polishing pad. The Office Action cites column 7, line 10-35 of Allman as being anticipatory to claims 2 and 10-13. Additionally, the Office Action cites column 5, lines 3-34; Figure 1 and column 7, lines 10-47 of Allman as being anticipatory to claims 7-9.

The applicants respectfully disagree. To be anticipatory, a single source must disclose all of the claimed elements "arranged as in the claim": *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989). Allman teaches an

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arrangement wherein a solution containing an adherence promoting ligand (functionalized alkylsilane) is sprayed ahead of a separate solution containing an abrasive particle. The arrangement taught by Allman is one where a ligand is bonded on the planarizing surface (pad) followed by binding of an abrasive particle. Claim 2 has been amended to include the limitation from claim 7 of "at least one metal abrasive" being part of the polishing slurry. The instant application, therefore, claims a single slurry comprising at least one functionalized alkylsilane compound in solution and at least one metal abrasive. Allman clearly teaches two separate solutions as being critical for the formation of the claimed arrangement. Whatever else Allman teaches, it does not teach applying a polishing slurry comprising at least one functionalized alkylsilane compound in solution and at least one metal abrasive. Therefore, Allman cannot be anticipatory to claim 1 as it does not disclose all of the claimed elements arranged as in the claim.

The Office Action has rejected claims 3-6 and 24-26 under 35 U.S.C. 103(a) as allegedly being unpatentable over Allman et al. (US 6,541,383). The Office Action states that Allman teaches a method for polishing a substrate feature where a polishing composition may be applied to a polishing pad. The Office Action further states that the polishing composition of Allman may include a solution comprising at least one functionalized alkylsilane compound in solution and at least one abrasive. The Office Action cites column 7, line 10-35 of Allman as being obvious to claims 2 and 10-13. Additionally, the Office Action cites column 5, lines 3-34; Figure 1 and column 7, lines 10-47 of Allman as being obvious to claims 7-9. The Office Action states that the instant application differs from Allman by specifying well-known features to the art of semi-conductor device fabrication and using various compositions. The Office Action further states that a person having ordinary skill in the art at the time of the invention would have found it obvious to modify Allman by performing routine experiments to obtain optimal results and adding any of the same well-known features in order to perform the polishing operation with a reasonable expectation of success.

The applicants respectfully disagree. As a first note, claims 3-6 have been canceled, without prejudice, and claim 2 has been amended. Claims 24-26 depend upon claim 2, and therefore, now include the limitations of the amended claim. Applicants assert that claims 24-26 are not unpatentable over Allman for the following reasons. "The mere fact that the prior

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art could be so modified [to produce the claimed device] would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). "Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." *Carella v. Starlight Archery*, 804 F. 2d 135, 231 U.S.P.Q. 644 (Fed. Cir. 1986). "The showing of motivation to combine must be clear and particular, and it must be supported by actual evidence." *Teleflex, Inc. v. Ficosa North American Corp.*, 299 F.3d 1313, 63 USPQ2d 1374 (Fed. Cir. 2002). The arrangement taught by Allman is one where a ligand is bonded on the planarizing surface (pad) followed by binding of an abrasive particle. The motivation of Allman is to avoid the reliance of fluid dynamics to advance abrasion particles under the semiconductor wafer (column 8, lines 19-21). The teachings of Allman do not provide motivation, suggestion or incentive to arrive at the claimed instant invention of a method of polishing a substrate feature by applying a slurry comprising at least one metal oxide abrasive. For at least the reasons stated above, the applicants respectfully request that the rejections under 35 U.S.C. §103(a) for claims 24-26 be withdrawn.

Claims 1, 2, 7-13 and 23-26 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as allegedly being obvious over U.S. Patent No. 5,861,055 to Allman et al. (hereinafter the '055 Allman patent). The Office Action states that the '055 Allman patent teaches a method for polishing a substrate feature where a polishing composition may be applied to a polishing pad. The Office Action states that the '055 Allman patent teaches that the polishing composition may comprise at least one silane in solution, and that the polishing composition may include at least one metal oxide abrasive. The Office Action states that the instant application differs from the '055 Allman patent by specifying well-known features to the art of semi-conductor fabrication. The Office Action argues that it would have been obvious to one with ordinary skill in the art to modify the teachings of the '055 Allman patent by adding any of the same well known features to the same order to efficiently perform polishing operation with a reasonable expectation of success.

The applicants respectfully disagree. The '055 Allman patent teaches a most preferred polishing composition comprising (1) a polishing media particle of silica; (2) a

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polyorganosiloxane binder; (3) an organofunctional silane wetting agent; and (4) an alcohol solvent. The ratio of the silica to polysiloxane to alcohol solvent is 1:1:1. (column 5, lines 16-22). The slurry of the '055 Allman is applied to an exposed substrate polishing surface to form a film prior to polishing. The stated advantage of the '055 Allman patent is to reduce slurry consumption by applying to the substrate, and not to the pad. In contrast, the instant invention is a method of polishing a substrate feature wherein the slurry is applied to the polishing pad. The '055 Allman patent cannot be anticipatory to the claims 1, 2, 7-13 and 23-26 because it does not disclose all of the claimed elements arranged as in the claim.

In fact, the '055 Allman patent teaches away from the method of the instant invention. The '055 Allman patent teaches a concentrated slurry designed to be applied to the substrate with the purpose of forming a temporary film. The claimed method of the instant invention recites that the slurry be applied to the pad. The teachings of the '055 Allman patent do not provide motivation, suggestion or incentive to arrive at the claimed instant invention of a method of polishing a substrate feature comprising applying a polishing composition to a polishing pad.

For at least the reasons stated above, the applicants respectfully request that the rejections under 35 U.S.C. §103(a) be withdrawn with respect to the '055 Allman patent.

If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned at the number listed.

Respectfully submitted,

By 

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